

Section of Obstetrics and Gynecology, October 25, 1927

INFECTED MYOMA UTERI; WITH REMARKS ON RED DEGENERATION

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By red degeneration we mean a form of necrosis or necrobiosis, appearing in myoma uteri, the red or other discoloration resulting from the diffusion through the specimen of the blood pigments, following hemolysis from excess of lipoids present. A continued excess of these lipoids will give other hues, ranging from mahogany to yellow, and finally to grey. Thus, on section, is offered a macroscopic difference from the accustomed white and shiny appearance of the unaltered fibroids. This necrosis is an aseptic process, bacteria being evident only in the infected cases. Infection is secondary to the degeneration. It is not conceivable that the hemolytic bacteria, ordinarily present in the vagina or cervix, are responsible for the suppurations found.

The change usually affects only one tumor, if others are present, and the mass increases in size suddenly upon the advent of the necrosis, the color differs with the amount of haemolyzing agent present and duration of its activity, but is most frequently pink or reddish, and is not followed by severe invalidism. Infection, however, is serious, setting up a marked toxic phase, with high temperature and leucocytosis and is considered fatal unless operated upon.

Degeneration is not infrequent, occurring as often as five to seven times every 100 cases, and is much more frequent in pregnancy; operation is never urgent and sometimes unnecessary, and in pregnant cases is elective at or after full term, and not usually urgent in the course of the gestation. On the other hand, suppuration is rare. Bacteria present are coli, staphylococci and streptococci, but gonococci have not been reported.

Symptoms are pain, tenderness, increase in size of tumor. An acute onset, with peritoneal irritation, high temperature, nausea and vomiting, and a decided toxic phase accompanies the suppurating types.

Summary.—Degeneration of fibroids is associated with the presence of lipoids, the accumulation of which is dependent on the presence and extent of thrombosis or infection. Infection is never primary. Thrombosis is not thought to be primary and not always present; in infection, it is likely primary. The microscopy is characterized by hyaline and granular degeneration, replacing or separating the muscle fibers remaining by the presence of fat and of karyolysis, the fat probably resulting from muscle change. There is no round-cell infiltration. Pregnancy is a predisposing factor. Infection gives rise to toxemia and is fatal, unless operation is undertaken, and here the mortality is high; in simple degeneration, operation is oftentimes advisable and can be successfully performed.

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ACTINOMYCOSIS OF THE OVARY AND FALLOPIAN TUBE

Report of Case with Pathologic Examination

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Actinomycosis involving the ovary, Fallopian tube or parametrium is an extremely rare condition, a survey of the literature yielding only forty-three cases to date. How the infection reaches the ovary in cases of ovarian actinomycosis, is a moot point. It was formerly believed that the ray fungus may enter the vagina and reach the ovary directly through the genital passages. A more likely theory is that the disease is secondary to intestinal actinomycosis. Actinomycosis has a predilection for the intestinal tract, and the lesion shows a tendency to burrow through the walls of the gut. The cecum and appendix constitute the favorite site for intestinal lesions, and it is easy to understand how the right ovary may become involved by a burrowing infection in this location. In the entire series of forty-three cases, the actinomycotic lesions in the genital tract were

located as follows: Ovaries alone, 17; tubes alone, 5; parametrium, 7; ovaries and tubes, 7; various combinations of ovaries, tubes, parametrium and uterus, 7.

The diagnosis of ovarian actinomycosis cannot be made until laparotomy is performed. Even then it may be in doubt unless the characteristic sulphur granules are in evidence, although a large, worm-eaten ovarian tumor filled with multiple tiny abscesses is very suggestive. The gross appearance of the organs often suggests a neoplasm, until the pathologist's report establishes the true condition.

The prognosis, according to published reports, is bad. In thirty-seven cases in which sufficient data were given, twenty-seven patients died, nine were considered as improved when last observed, and only one was designated as apparently recovered.

Treatment is extremely unsatisfactory, especially in view of the fact that the diagnosis is seldom made before the lesion is far advanced. Where involvement is not too extensive, an attempt should be made to eradicate all of the diseased tissue. By way of medication, potassium iodide in large dosage is probably the only remedy that has been found of definite service; but many cases of abdominal actinomycosis fail to show benefit from its use.

A case of actinomycosis of the right ovary and Fallopian tube, with chronic salpingitis and peri-oöphoritis on the opposite side, is reported. The patient was a housewife, aged 39, whose only symptoms were pain in the right inguinal region and persistent fever. The uterus was enlarged, and there was a mass the size of an orange occupying the position of the right adnexa. The clinical diagnosis was right pyo-salpinx, and at laparotomy a pseudo-tumor composed of the right pyo-salpinx, the uterus, omentum and coils of intestines, all bound together by adhesions, was found. There was nothing to suggest the rare condition of pelvic actinomycosis. A persistent, discharging fistula remained after the operation, and later the right inguinal glands broke down. A second laparotomy was performed but the patient died. Microscopic sections from the remains of the right ovarian tumor mass showed typical colonies of *Actinomyces bovis*.